

Nevada
Environmental
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DOE/NV/11718--207-ADD



Addendum to the Closure Report for Corrective Action Unit 403: Second Gas Station, Tonopah Test Range, Nevada

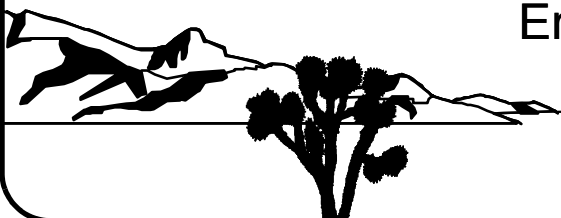
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**ADDENDUM TO THE CLOSURE REPORT FOR
CORRECTIVE ACTION UNIT 403:
SECOND GAS STATION,
TONOPAH TEST RANGE, NEVADA**

U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office
Las Vegas, Nevada

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Addendum to the Closure Report for Removal of the Use Restriction

This document constitutes an addendum to the *Closure Report for Corrective Action Unit 403: Second Gas Station, Tonopah Test Range, Nevada*, September 1998 as described in the document *Supplemental Investigation Report for FFACO Use Restrictions, Nevada Test Site, Nevada* (SIR) dated November 2008. The SIR document was approved by NDEP on December 5, 2008. The approval of the SIR document constituted approval of each of the recommended UR removals. In conformance with the SIR document, this addendum consists of:

- This page that refers the reader to the SIR document for additional information
- The cover, title, and signature pages of the SIR document
- The NDEP approval letter
- The corresponding section of the SIR document

This addendum provides the documentation justifying the cancellation of the UR for CAS 03-02-004-0360, Underground Storage Tanks. This UR was established as part of a *Federal Facility Agreement and Consent Order* (FFACO) corrective action and is based on the presence of contaminants at concentrations greater than the action levels established at the time of the initial investigation (FFACO, 1996).

Since this UR was established, practices and procedures relating to the implementation of risk-based corrective actions (RBCA) have changed. Therefore, this UR was re-evaluated against the current RBCA criteria as defined in the *Industrial Sites Project Establishment of Final Action Levels* (NNSA/NSO, 2006). This re-evaluation consisted of comparing the original data (used to define the need for the UR) to risk-based final action levels (FALs) developed using the current Industrial Sites RBCA process.

The re-evaluation resulted in a recommendation to remove the UR because contamination is not present at the site above the risk-based FALs. Requirements for inspecting and maintaining this UR will be canceled, and the postings and signage at this site will be removed. Fencing and posting may be present at this site that are unrelated to the FFACO UR such as for radiological control purposes as required by the *NV/YMP Radiological Control Manual* (NNSA/NSO, 2004). This modification will not affect or modify any non-FFACO requirements for fencing, posting, or monitoring at this site.

References

DOE/NV, see U.S. Department of Energy, Nevada Operations Office.

FFACO, see *Federal Facility Agreement and Consent Order*.

Federal Facility Agreement and Consent Order. 1996 (as amended). Agreed to by the State of Nevada, U.S. Department of Energy, and U.S. Department of Defense.

NNSA/NSO, see U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office.

- U.S. Department of Energy, Nevada Operations Office. 1998. *Closure Report for Corrective Action Unit 403: Second Gas Station, Tonopah Test Range, Nevada*, Rev. 0, DOE/NV/11718-207. September. Las Vegas, NV.
- U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2004. *NV/YMP Radiological Control Manual*, DOE/NV/11718--079, Rev. 5. Prepared by Bechtel Nevada. Las Vegas, NV.
- U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2006. *Industrial Sites Project Establishment of Final Action Levels*, Rev. 0, DOE/NV--1107. Las Vegas, NV.
- U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office. 2008. *Supplemental Investigation Plan for FFACO Use Restrictions, Nevada Test Site, Nevada*, Rev. 0, DOE/NV--1256. Las Vegas, NV.

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Supplemental Investigation Report for FFACO Use Restrictions Nevada Test Site, Nevada

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SUPPLEMENTAL INVESTIGATION REPORT FOR FFACO USE RESTRICTIONS NEVADA TEST SITE, NEVADA

U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office
Las Vegas, Nevada

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Reviewed and determined to be UNCLASSIFIED. This review does not constitute clearance for public release. Derivative Classifier: <u>Joseph Johnston, CO</u> <small>(Name/personal identifier and position title)</small> Signature: <u>/s/Joseph Johnston</u> Date: <u>11/24/2008</u>
--

November 2008

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**SUPPLEMENTAL INVESTIGATION REPORT FOR
FFACO USE RESTRICTIONS:
NEVADA TEST SITE, NEVADA**

Approved by: /S/Kevin J. Cabble

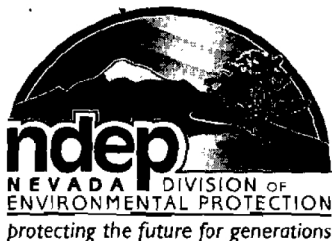
Date: 11/12/2008

Kevin J. Cabble
Federal Sub-Project Director
Industrial Sites Sub-Project

Approved by: /S/ Robert F. Boehlecke

Date: 11/12/2008

Robert F. Boehlecke
Federal Project Director
Environmental Restoration Project



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Jim Gibbons, Governor

Allen Biaggi, Director

Leo M. Drozdoff, P.E., Administ

ERD.081211.0001

December 5, 2008

Robert F. Boehlecke
Federal Project Director
Environmental Restoration Project
National Nuclear Security Administration
Nevada Site Office
P. O. Box 98518
Las Vegas, NV 89193-8518

RE: Approval of Final Supplemental Investigation Report for FFACO Use Restrictions
Nevada Test Site and Tonopah Test Range, Nevada, Revision 0, November
2008
Federal Facility Agreement and Consent Order

Dear Mr. Boehlecke:

The Nevada Division of Environmental Protection, Bureau of Federal Facilities (NDEP) staff has received and reviewed the submittal of the Final Supplemental Investigation Report for FFACO Use Restrictions, Nevada Test Site and Tonopah Test Range, Nevada, Revision 0, November 2008. The report is hereby approved without comments pursuant to Subpart XII.8.a of the *Federal Facility Agreement and Consent Order* (FFACO).

Address any questions regarding this matter to either Ted Zaferatos at (702) 486-2850, ext. 234, Jeff MacDougall at (702) 486-2850, ext. 233, or me at (702) 486-2850, ext. 231.

Sincerely,

/s/Chris Andres for

T.H. Murphy
Chief
Bureau of Federal Facilities

ACTION
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Robert F. Boehlecke

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December 5, 2008

JJM/TZ

cc: K. J. Cabble, ERP, NNSA/NSO, Las Vegas, NV
E.F. DiSanza, WMP, NNSA/NSO
FFACO Group, PSG, NNSA/NSO, Las Vegas, NV
Jeffrey Fraher, DTRA/CXTS, Kirkland AFB, NM
W.R. Griffin, SNJV/DTRA, M/S 645, Mercury, NV
T.A. Thiele, NSTec, Las Vegas, NV
John Wong, Dennis Nicodemus, Kevin Campbell, NDEP Las Vegas, NV

**Table 4-7
Sample Results for VOCs Detected above Minimum
Detectable Concentrations at UR 19-09-05**

Sample Location	Sample Number	Depth (ft bgs)	Contaminants of Potential Concern (mg/kg)		
			Acetonitrile	Ethylbenzene	Xylenes (total)
Final Action Levels ^a			1,800	400	420
G01	358G001	0.0 - 0.5	0.015 (J)	0.000388 (J)	0.00173
G02	358G002	0.0 - 0.5	--	0.000307 (J)	0.0017

^aBased on U.S. Environmental Protection Agency, *Regional Screening Levels for Chemical Contaminants at Superfund Sites* (EPA, 2008a).

bgs = Below ground surface

J = Estimated value

ft = Foot

-- = Not detected above minimum detectable concentrations.

mg/kg = Milligrams per kilogram

4.3.5 Recommended Modification

Remove the FFACO UR, signage, and associated inspection and maintenance requirements from this site.

4.4 CAU 403, CAS 03-02-004-0360 – Underground Storage Tanks

4.4.1 CAS Description

Corrective Action Site 03-02-004-0360 consists of subsurface petroleum hydrocarbon releases from two USTs (one gasoline and one diesel) formerly located at the Second Gas Station in Area 3 of the TTR. The Second Gas Station was in use from approximately 1965 to 1980. The USTs were located approximately 36 ft east of the Old Light Duty Shop, Building 0360. Sometime between August 8, 1982, and June 13, 1987, the two USTs and associated dispensary stations were removed. During removal of the 4000-gal diesel UST, a breach was observed below the top of the tank, and the soil surrounding the tank appeared to be visibly contaminated. There were no visible signs of contamination during removal of the gasoline tank. The site was subject to corrective actions that included the implementation of a UR for TPH contamination (DOE/NV, 1996).

4.4.2 Current Use Restriction Description

A UR is in place at the site due to TPH contamination. The UR, as recorded in the FFACO, states the future use of land related to this CAU, as described by surveyed location, is restricted from DOE or U.S. Air Force activity that may alter or modify the containment control, as identified by the state and in the CR or other CAU documentation, unless appropriate concurrence is obtained in advance. The Restricted Excavation Area begins at the eastern wall of Building 0360 and extends eastward 45 ft east. Surface disturbances may be required for maintenance and repair purposes in the Restricted Excavation Area because subsurface utilities are present. In these cases, approval for excavation or surface disturbance will be provided by the Sandia National Laboratories Health and Safety Officer, or designee. The Sandia National Laboratories Health and Safety Officer, or designee, will inform DOE in writing (within three weeks of the surface disturbance) of the purpose, time, and extent of the surface disturbance; surface restoration activities/modifications; and disposition of the excavated materials. Signs were posted identifying the site and restricting surface disturbances. There are no monitoring requirements associated with the UR (DOE/NV, 1998a).

4.4.3 Basis for Current Use Restriction

Samples taken from 12 borings at CAS 03-02-004-0360 were analyzed for TPH diesel range, TPH gasoline range, and toxicity characteristic lead. Based on the results, TPH was the only contaminant detected above action levels. Concentrations of TPH exceeded the action level of 100 mg/kg in 7 of 39 samples; therefore, a UR was implemented. [Table 4-8](#) contains analytical results for soil samples used to establish UR 03-02-004-0360 (DOE/NV, 1997b).

Table 4-8
Sample Results for the Basis of UR 03-02-004-0360
(Page 1 of 2)

Sample Identification	Boring Identification	Depth (ft bgs)	TPH Diesel (mg/kg)	TPH Fuel Oil #2 (mg/kg)	TPH Gasoline (mg/kg)
			Action Level 100 mg/kg	Action Level 100 mg/kg	Action Level 100 mg/kg
TTR00121	SB-1	2	ND	1,500	ND
TTR00124	SB-4	22	ND	210	1.2 (Y)
TTR00152	SB-5	2	120	ND	ND
TTR00156	SB-5	12	11,000	ND	6.4 (Y)

Table 4-8
Sample Results for the Basis of UR 03-02-004-0360
(Page 2 of 2)

Sample Identification	Boring Identification	Depth (ft bgs)	TPH Diesel (mg/kg)	TPH Fuel Oil #2 (mg/kg)	TPH Gasoline (mg/kg)
			Action Level 100 mg/kg	Action Level 100 mg/kg	Action Level 100 mg/kg
TTR00157	SB-5	12	10,000	ND	7.2 (Y)
TTR00153	SB-5	22	12,000	ND	150.0 (Y)
TTR00158	SO-3B	22	5,300	ND	8.6 (Y)

Note: Bold text indicates value exceeding the action level.

bgs = Below ground surface

ft = Foot

mg/kg = Milligrams per kilogram

ND = Not detected

TPH = Total petroleum hydrocarbons

Y = The Gas Chromatograph pattern appears multipeaked but does not match gasoline.

4.4.4 Basis for Use Restriction Modification

One environmental sample was collected from a new borehole at CAS 03-02-004-0360 according to the sampling plan (NNSA/NSO, 2008) and analyzed for VOCs and SVOCs in which the hazardous constituents of TPH are reported. [Table 4-9](#) presents the VOC results that were detected above the MDCs. None of the SVOCs were detected above MDCs.

The analytical results were evaluated using the RBCA process (NNSA/NSO, 2006) in which the individual results of contaminants (detected above the MDCs) were compared to the FALs. None of the hazardous constituents of TPH were identified above their respective FALs; therefore, there are no COCs present at this site.

**Table 4-9
Sample Results for VOCs Detected above Minimum
Detectable Concentrations at UR 03-02-004-0360**

Sample Location	Sample Number	Depth (ft bgs)	Contaminants of Potential Concern (mg/kg)						
			1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	4-Isopropyltoluene	Acetone	Tetrachloroethylene	Toluene	Xylenes (total)
Final Action Levels ^a			170	70	2,000	54,000	1.3	520	420
M01	403M001	14.5 - 15.0	0.508 (J)	2.54 (J)	1.15 (J)	0.00964	0.00903	0.0022	0.556 (J)

^aBased on U.S. Environmental Protection Agency, *Regional Screening Levels for Chemical Contaminants at Superfund Sites* (EPA, 2008a).

bgs = Below ground surface

J = Estimated value

ft = Foot

mg/kg = Milligrams per kilogram

4.4.5 Recommended Modification

Remove the FFACO UR, signage, and associated inspection and maintenance requirements from this site.

4.5 CAU 452, CAS 25-25-09 – Spill H940825C (from UST 25-3101-1)

4.5.1 CAS Description

Corrective Action Site 25-25-09 consists of a subsurface petroleum hydrocarbon release identified at the UST located at Building 3101 in Area 25. The 4,000-gal capacity diesel-fuel tank was located on the south side of the building within the Area 25 CP Facility. On July 20, 1994, the tank was removed, and closure of the UST (as part of CAS 25-02-13) was accepted by NDEP in 1995. Due to practical constraints at the site, soils surrounding the tank were not excavated and hydrocarbon releases to these soils were included in CAS 25-25-09 (DOE/NV, 1998b). This CAS was subject to corrective action that included sampling to define the extent of the release, and resulted in the implementation of a UR for TPH contamination (DOE/NV, 1998b).

References

DOE/NV, see U.S. Department of Energy, Nevada Operations Office.

EPA, see U.S. Environmental Protection Agency.

FFACO, see *Federal Facility Agreement and Consent Order*.

Federal Facility Agreement and Consent Order. 1996 (as amended February 2008). Agreed to by the State of Nevada; U.S. Department of Energy, Environmental Management; U.S. Department of Defense; and U.S. Department of Energy, Legacy Management.

NNSA/NSO, see U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office.

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U.S. Department of Energy, Nevada Operations Office. 1997b. *Corrective Action Decision Document, Second Gas Station, Tonopah Test Range, Nevada (Corrective Action Unit No. 403)*, Rev. 0, DOE/NV--471. March. Las Vegas, NV.

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U.S. Department of Energy, Nevada Operations Office. 1998b. *Streamlined Approach for Environmental Restoration Closure Report for Corrective Action Unit 452: Historical Underground Storage Tank Release Sites, Nevada Test Site, Nevada*, Rev. 0, DOE/NV/11718-209. April. Las Vegas, NV.

U.S. Environmental Protection Agency. 2008a. *Regional Screening Levels for Chemical Contaminants at Superfund Sites*. As accessed at <http://epa-prgs.ornl.gov/chemicals/index.shtml> on 27 July. Prepared by EPA Office of Superfund and Oak Ridge National Laboratory.

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